

AMENDMENT TO THE CLAIMS

Please **AMEND** claims 14, 15, 18, 19, 23-26; and

Please **ADD** claims 31-36 as follows.

A copy of all pending claims and a status of the claims is provided below.

Claims 1-13. (Canceled)

14. (Currently Amended) A semiconductor structure comprising:
a semiconductor substrate;
a first active device formed on the substrate, the first active device having a first ~~dielectric~~ gate dielectric, which has a first concentration of nitrogen; and
a second active device formed on the substrate, the second active device having a second ~~dielectric~~ gate dielectric, which has a second concentration of nitrogen different than the first concentration of nitrogen,
wherein the second gate dielectric is thicker than the first gate dielectric.

15. (Currently Amended) A semiconductor structure according to claim 14, wherein:
the first ~~dielectric~~ gate dielectric has a first thickness susceptible to appreciable dopant diffusion and current leakage; and
the second ~~dielectric~~ gate dielectric has a second thickness susceptible to appreciable dopant diffusion and current leakage.

16. (Original) A semiconductor structure according to claim 15, wherein the second concentration of nitrogen is less than the first concentration of nitrogen.

17. (Original) A semiconductor structure according to claim 16, wherein the second active device is a p-channel field effect transistor and the first active device is an n-channel field effect transistor.

18. (Currently Amended) A semiconductor structure according to claim 14, wherein the first ~~dielectric~~ gate dielectric has a first thickness being susceptible to appreciable dopant diffusion or current leakage; and the second ~~dielectric~~ gate dielectric having a second thickness not being susceptible to appreciable dopant diffusion or current leakage.

19. (Currently Amended) A semiconductor structure according to claim 4-8 18, wherein the second concentration of nitrogen is less than the first concentration of nitrogen.

20. (Original) A semiconductor structure according to claim 15, wherein the first thickness and second thickness are less than about fifty angstroms.

21. (Original) A semiconductor structure according to claim 18, wherein the first thickness is less than about fifty angstroms; and the second thickness is about fifty angstroms or greater.

22. (Original) A semiconductor structure according to claim 14, wherein the first concentration of nitrogen and the second concentration of nitrogen were selectively introduced by one or more processes including one of:

- rapid thermal nitridation;
- furnace nitridation;
- remote plasma nitridation;
- decoupled plasma nitridation;
- well implantation; and
- polysilicon implantation.

23. (Currently Amended) ~~A semiconductor structure according to claim 14, A~~
semiconductor structure comprising:
a semiconductor substrate;

a first active device formed on the substrate, the first active device having a first gate dielectric, which has a first concentration of nitrogen; and

a second active device formed on the substrate, the second active device having a second gate dielectric, which has a second concentration of nitrogen different than the first concentration of nitrogen,

wherein the first concentration of nitrogen is about 8×10^{14} to 1×10^{22} atoms/centimeter² atoms/cm³.

24. (Currently Amended) ~~A semiconductor structure according to claim 14, A~~
semiconductor structure comprising:

a semiconductor substrate;

a first active device formed on the substrate, the first active device having a first gate dielectric, which has a first concentration of nitrogen; and

a second active device formed on the substrate, the second active device having a second gate dielectric, which has a second concentration of nitrogen different than the first concentration of nitrogen,

wherein the first concentration of nitrogen is sufficient to prevent appreciable gate leakage and dopant penetration in the first ~~dielectric~~ gate dielectric without causing an appreciable threshold-voltage shift in the first ~~dielectric~~ gate dielectric.

25. (Currently Amended) A semiconductor structure according to claim 24,
wherein the second concentration of nitrogen is about 1×10^{13} to 1×10^{15} atoms/centimeter² atoms/cm³.

26. (Currently Amended) ~~A semiconductor structure according to claim 14, A~~
semiconductor structure comprising:

a semiconductor substrate;

a first active device formed on the substrate, the first active device having a first gate dielectric, which has a first concentration of nitrogen; and

a second active device formed on the substrate, the second active device having a second gate dielectric, which has a second concentration of nitrogen different than the first concentration of nitrogen.

wherein the second concentration of nitrogen is sufficient to prevent appreciable gate leakage and dopant penetration in the second ~~dielectric~~ gate dielectric without causing an appreciable threshold-voltage shift in the second ~~dielectric~~ gate dielectric.

Claims 27-30. (Canceled).

31. (New) The semiconductor structure of claim 14, wherein the first gate dielectric has a first thickness and the second gate dielectric has a second thickness greater than the first thickness, and wherein the second concentration of nitrogen is less than the first concentration of nitrogen.

32. (New) The semiconductor structure of claim 31, wherein the first active device is a p-well and the second active device is an n-well.

33. (New) The semiconductor structure of claim 31, wherein the first active device is a n-FET and the second active device is an p-FET.

34. (New) The semiconductor structure of claim 33, wherein the first and second gate dielectrics are each an oxynitride layer.

35. (New) The semiconductor structure of claim 31, wherein the first and second gate dielectrics are each an oxynitride layer.

36. (New) The semiconductor structure of claim 35, wherein the first active device is a p-well or an n-FET and the second active device is an n-well or a p-FET.